

## **VIII. SUMMARY AND CONCLUSIONS**

It is clear that the assumptions underlying the Commission's decision to rely on market forces rather than a regulatory solution to high access charges was premature. Competition does not exist today to any meaningful extent, and is not likely to grow to the level that would result in reductions of access charges to cost in the foreseeable future, even under the most optimistic assumptions.

I declare, under penalty of perjury, that the foregoing is true and correct. Executed on May 5, 1998.

A. Daniel Kelley

**Daniel Kelley**

**PROFESSIONAL EXPERIENCE:**

**Senior Vice President, HAI Consulting, Inc., Boulder Colorado (current position).**

Conducting economic and applied policy analysis of domestic and international telecommunications public policy and business issues. Recent projects have included advising Central and Eastern European Governments on privatization and competition matters, assisting a private client with entry into the long distance market in Mexico, analyzing competitive conditions in cellular radio markets, analyzing the economics of cable television regulation, analyzing the prospects for local competition and measuring the economic cost of local service.

**Director of Regulatory Policy, MCI Communications Corporation, 1984-1990.**

Responsible for developing and implementing MCI's public policy positions on issues such as dominant carrier regulation, Open Network Architecture, accounting separations and Bell Operating Company line of business restrictions. Also managed an interdisciplinary group of economists, engineers and lawyers engaged in analyzing AT&T and local telephone company tariffs.

**Senior Economist and Project Manager, ICF Incorporated, 1982-1984.**

Telecommunications and antitrust projects included: forecasting long distance telephone rates; analysis of the competitive effects of AT&T's long distance rate structures; a study of optimal firm size for cellular radio markets; analysis of the FCC's Financial Interest and Syndication Rules, and competitive analysis of mergers and acquisitions in a variety of industries.

**Senior Economist, Federal Communications Commission, 1979-1982.**

Served as Special Assistant to the Chairman during 1980-1981. Advised the Chairman on proposed regulatory changes in the broadcasting, cable television and telephone industries; analyzed legislation and drafted Congressional testimony. Coordinated Bureau and Office efforts on major common carrier matters such as the Second Computer Inquiry and the Competitive Carrier Rulemaking. Also held Senior Economist positions in the Office of Plans and Policy and the Common Carrier Bureau.

**Staff Economist, U.S. Department of Justice, 1972-1979.**

Analyzed proposals for restructuring the Bell System as a member of the economic staff of U.S. v. AT&T; investigated the competitive effects of mergers and business practices in a wide variety of industries.

## EDUCATION:

1976	Ph.D. in Economics	University of Oregon
1971	M.A. in Economics	University of Oregon
1969	B.A. in Economics	University of Colorado

## PUBLICATIONS AND COMPLETED RESEARCH:

"Cable and Wireless Alternatives to Residential Local Exchange Service," Berkeley Conference on Convergence and Digital Technology (1997), with Alan J. Boyer and David M. Nugent.

"A General Approach to Local Exchange Carrier Pricing and Interconnection Issues," Telecommunications Policy Research Conference, (1992), with Robert A. Mercer.

"Gigabit Networks: Is Access a Problem?" IEEE Gigabit Networking Workshop (1992).

"Advances in Network Technology" in Barry Cole, ed., After the Break-Up: Assessing the New Post-AT&T Divestiture Era (1991).

"Alternatives to Rate of Return Regulation: Deregulation or Reform?" in Alternatives to Rate Base Regulation in the Telecommunications Industry, NARUC (1988).

"AT&T Optional Calling Plans: Promotional or Predatory" in Harry M. Trebing, ed., Impact of Deregulation and Market Forces on Public Utilities: The Future Role of Regulation (1985).

"The Economics of Copyright Controversies in Communications" in Vincent Mosco, ed., Policy Research in Telecommunications (1984).

"Deregulation After Divestiture: The Effect of the AT&T Settlement on Competition," FCC, OPP Working Paper No. 8 (1982).

"The Transition to Structural Telecommunications Regulation," in Harry M. Trebing, ed., New Challenges for the 1980's (1982), with Charles D. Ferris.

"Social Objectives and Competition in Common Carrier Communications: Incompatible or Inseparable?" in Harry M. Trebing ed., Communications and Energy in Transition (1981), with Nina W. Cornell and Peter R. Greenhalgh.

"An Empirical Survey of Price Fixing Conspiracies," Journal of Law and Economics (1974), with George A. Hay. Reprinted in Siegfried and Calvari, ed., Economic Analysis and Antitrust Law (1978) and the Journal of Reprints for Antitrust Law and Economics (1980).

## **TESTIMONY:**

Federal Communications Commission, Application of Cellular Communications of Cincinnati, July 25, 1983 (with Robert J. Reynolds): Optimum firm size in the cellular radio market

Maryland Public Service Commission, Case No. 0450-Phase II, May 31, 1983: Access charge implementation issues

New York Public Service Commission, Case No. 28425, June 1983: Access charge implementation issues

Florida Public Service Commission, Docket No. 820537-TP, June 30, 1983, November 4, 1983, April 9, 1984, June 4, 1984, September 7, 1984, October 25, 1984 and August 15, 1985: Access charge implementation issues

Pennsylvania Public Utility Commission, Docket No. R-832, August 5, 1983: Pennsylvania Bell Rate Case

New Jersey Board of Public Utilities, Docket No. 83-11, February 20, 1984: Access charge implementation issues

New York Public Service Commission, Case 88-C-102, March 2, 1990: Alternative Operator Service Issues

California Public Service Commission, A.90-07-015, July 10, 1990: AT&T Deregulation

New York Public Service Commission, Case 28425, October 8, 1990: IntraLATA Dial 1 Competition

Massachusetts Department of Public Utilities, DPU 90-133, October 17, 1990: AT&T Deregulation

Georgia Public Service Commission, 3905-U, November 16, 1990: Incentive Regulation

California Public Service Commission, I-87-11-033, September 23, 1991: IntraLATA Competition

Georgia Public Service Commission, Docket No. 3987-U, January 31, 1992: Cross-Subsidy

Colorado Public Utilities Commission, Docket No. 92R-050T, August 24, 1992: Collocation

Connecticut Department of Public Utility Control, Docket No. 9106-10-06, September 25, 1992: Infrastructure

Maryland Public Service Commission, Case No. 8584, Phase II, July 21, 1995: Local Competition.

Connecticut Department of Public Utility Control, Docket No. 95-06-17, September 8, 1995: Local Competition .

Federal-State Joint Board on Universal Service, CC Docket No. 96-45, June 5, 1996: Cost Modeling.

Colorado Public Utilities Commission, Docket No. 96A-287T, September 6, 1996: Arbitration.

Oregon Public Service Commission, Dockets ARB 3 & 6, October 14, 1996: Arbitration.

Hawaii Public Utilities Commission, October 17, 1996: Arbitration.

Michigan Public Service Commission, October 24, 1996: Arbitration.

New York Public Service Commission, Case No. 28425, May 9, 1997: Access charges.

Colorado Public Utilities Commission, Docket No. 97F-175T, July 18, 1997: Access Charges.

Utah Public Service Commission, Docket No. 97-049-08, October 2, 1997: Access charges.

Connecticut Department of Public Utility Control, Docket No. 96-04-07, February 10, 1998: Access Charges.

J

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Application of BellSouth Corporation,	)	CC Docket No. 98-121
BellSouth Telecommunications, Inc.	)	
and BellSouth Long Distance, Inc.	)	
for Provision of In-Region, InterLATA	)	
Services in Louisiana	)	

**Exhibit J:**  
**In re BellSouth Telecommunications, Inc.'s Entry Into Long Distance (InterLATA)**  
**Service in Tennessee Pursuant to Section 271 of the Telecommunications Act of 1996,**  
**Docket No. 97-00309, Transcript of Proceedings (May 7, 1998)(excerpt)**

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**TENNESSEE REGULATORY AUTHORITY - DOCKET NO. 97-00309**

**May 7, 1998 - Volume III D**

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**CONDENSED TRANSCRIPT AND CONCORDANCE  
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## BEFORE THE TENNESSEE REGULATORY AUTHORITY

IN RE:

BELL SOUTH TELECOMMUNICATIONS, INC.'S  
ENTRY INTO LONG DISTANCE (INTERLATA)  
SERVICE IN TENNESSEE PURSUANT TO  
SECTION 271 OF THE TELECOMMUNICATIONS  
ACT OF 1996

DOCKET NO.  
97-00309

## TRANSCRIPT OF PROCEEDINGS

Thursday, May 7, 1998

VOLUME III D

## APPEARANCES:

For BellSouth: Mr. Guy M. Hicks  
Mr. Bennett Ross  
Mr. William J. Ellenberg, II

For AT&T: Mr. James P. Lamoureux

For MCI: Ms. Susan Berlin  
Mr. Dwayne L. O'Reark

For TCC MidSouth, Inc.: Ms. D. Billie Sanders

For Consumer Advocate: Mr. Vance L. Broemel

For ACSI, SECA,  
and Brooks: Mr. Henry Walker

For Sprint: Ms. Carolyn Tatum Roddy

For Intermedia,  
UCI, and WorldCom: Mr. M. LeDon Baltimore

For NEXTELINK: Ms. Dana Shaffer  
Mr. Henry C. Campen, Jr.

For BellSouth  
Long Distance: Mr. Ouliford P. Thornton, Jr.

Reported by:  
Patricia W. Smith, RPR, CCR

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## EXHIBITS

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[ 1 ] (The aforementioned cause came on to  
[ 2 ] be heard on Thursday, May 7, 1998, beginning at  
[ 3 ] approximately 2:45 p.m., before Chairman Lynn Greer,  
[ 4 ] Director Sara Kyle, and Director Melvin Malone, when  
[ 5 ] the following proceedings were had, to-wit:)

CHAIRMAN GREER: Mr. Broemel.

ROY M. NEEL,

[10] having been previously sworn, was examined and  
[11] testified as follows:

## CROSS-EXAMINATION

BY MR. BROEMEL:

[15] Q. Hello. I'm Vance Broemel with the Consumer  
[16] Advocate Division. First I'd like to ask you about  
[17] this one-stop shopping. Now, you say this is what, I  
[18] believe, responses of members of the USTA have shown  
[19] that customers want; is that correct?

[20] A. That's correct.

[21] Q. Has there ever been a survey or any kind of  
[22] written report on that, or is that anecdotal?

[23] A. We have reviewed numerous marketing surveys  
[24] of local exchange providers everywhere, not just the  
[25] Bell companies, that have stated that along with or

[ 1 ] just went to price, one-stop shopping for this morass  
[ 2 ] of telecommunications services is a major priority.

[ 3 ] Q. Now, and it's your belief that -- well, is  
[ 4 ] it your belief that BellSouth is in the best position  
[ 5 ] to give that of any company in Tennessee?

[ 6 ] A. Not necessarily. It's just one of any  
[ 7 ] number of companies that could do that. But currently  
[ 8 ] they're not allowed to.

[ 9 ] Q. Now, I want to ask you isn't one reason  
[10] that BellSouth is in a position to offer this one-stop  
[11] shopping is because it already has a network in place  
[12] that can handle both long distance and local service?

[13] A. I'm not sure that that is the primary  
[14] reason they can do that any more than now with the  
[15] opening of the local market an interexchange carrier  
[16] could do the same thing. I think that would be an  
[17] advantage or one advantage that all of these  
[18] facilities-based carriers would be able to employ. For  
[19] instance, you know, if you're AT&T, for example, you  
[20] have a huge customer base.

[21] So I think that there are a number of  
[22] assets that a number of companies would have in really  
[23] giving customers what they want.

[24] Q. Okay. I'd like to show you a couple of  
[25] documents and then just ask you to respond to these

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[1] statements that you were referring to where you're  
[2] losing money.  
[3] Have you heard -- or what is your position,  
[4] if you have one, on any potential legislation that  
[5] would allow the Bell companies to direct of local  
[6] services? Do you know of any such thing?  
[7] A. Are you referring to legislation that would  
[8] require a Bell company to direct local services?  
[9] Q. Or would allow them to, yeah.  
[10] A. You said "allow."  
[11] Q. Yeah.  
[12] A. I'm not aware of any legislation pending  
[13] that would -- that would allow a Bell company to -- if  
[14] what I'm hearing counsel say -- get out of the local  
[15] business, no.  
[16] Q. Now, I want to ask you about an exhibit to  
[17] your testimony, it's EN-53181 B, and it's attached  
[18] to that. And this is on page 5. Do you see that?  
[19] A. Yes.  
[20] Q. And you make the statement,  
[21] "Fixed-wireless or digital-cablestar or PCS may become  
[22] cost-effective at some point."  
[23] A. Are you referring to the financial  
[24] analysis report?  
[25] Q. It's in the -- yeah, I want to -- the

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[1] exhibit called K. Encore inc.  
[2] A. All right. The exhibit states --  
[3] CHAIRMAN GREEN: The second line from  
[4] the top? Is that the one you're referring to?  
[5] MR. BROEMEL: Yes. It says,  
[6] "Fixed-wireless" -- excuse me.  
[7] THE WITNESS: Right, that's what the  
[8] statement says, yeah.  
[9] BY MR. BROEMEL:  
[10] Q. And I want to ask you -- well, let me read  
[11] the statement, "Fixed-wireless or digital-cablestar or  
[12] PCS may become cost-effective at some point, but are  
[13] not at this point."  
[14] Now, do you agree with that statement?  
[15] A. Personally -- not the position of the  
[16] association -- I would agree with that statement, yes.  
[17] Q. Okay. So you would agree that PCS at this  
[18] point is not a computerized alternative to wire line  
[19] service?  
[20] A. To wire line local residential service that  
[21] is priced far below cost, no, I believe they're not.  
[22] Q. Okay. Now, if BellSouth is granted  
[23] local AT&T authority, will BellSouth -- or do you know  
[24] of any plans they would have to make these same kind of  
[25] calls to consumers that you referred to -- that was

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[1] referred to by Mr. Lammertus in those AT&T ads? Do  
[2] they have a campaign on that?  
[3] A. I have no idea what their plans would be  
[4] since they're not even allowed to consider it at this  
[5] time.  
[6] MR. BROEMEL: Now, let me just check.  
[7] I think we're about ready to wrap it up. (Mr. Broemel  
[8] confers with Mr. Hickenbotham.)  
[9] BY MR. BROEMEL:  
[10] Q. Okay. One final question then.  
[11] You weren't here to hear this, but there  
[12] was discussion about making filings after the hearing  
[13] is over that would go to the FCC that then would be  
[14] considered as part of -- or at least there's been  
[15] discussion it would be part of the record.  
[16] Have you commissioned any studies or  
[17] anything of that sort that you intend to file on behalf  
[18] of BellSouth to this date, either here or at the FCC?  
[19] A. I don't believe USTA has commissioned any  
[20] studies that would relate to BellSouth's 271 filing.  
[21] MR. BROEMEL: Okay. That's all.  
[22] CHAIRMAN GREEN: Mr. Baltimore.  
[23] MR. BALTIMORE: I have no questions.  
[24] CHAIRMAN GREEN: Mr. Sadden.  
[25] //

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#### CROSS-EXAMINATION

[1] BY MS. SANDERS:  
[2] Q. Mr. Neel, I'm Billy Sadden, representing  
[3] TCO MidSouth, Inc.  
[4] You mentioned earlier in your testimony  
[5] that BellSouth had lost more than 50,000 customers in  
[6] Tennessee. Did you mean customers or access lines?  
[7] A. Ms. Sanders, I believe I corrected my -- or  
[8] at least clarified it to say lines.  
[9] Q. Okay. Now, do you know how many access  
[10] lines BellSouth has in the state of Tennessee?  
[11] A. Not exactly, but I believe you're gonna  
[12] tell me.  
[13] Q. You're right. I have an exhibit here which  
[14] has that information. It's roughly 2.6 million.  
[15] CHAIRMAN GREEN: Mr. Walker, would you  
[16] pass those out for her while she goes through it, to  
[17] serve as a little time, since Mr. Laddery is not here.  
[18] MS. SANDERS: Thank you, Mr. Walker.  
[19] This document, that's being passed out  
[20] is actually a letter from the Consumer Advocate to  
[21] the -- to Mike Williams of the General Assembly. And  
[22] attached it has an exhibit which indicates the access  
[23] lines for BellSouth. And it's my understanding that  
[24] this information was taken from BellSouth's 301 reports  
[25]

K

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Application of BellSouth Corporation,	)	CC Docket No. 98-121
BellSouth Telecommunications, Inc.	)	
and BellSouth Long Distance, Inc.	)	
for Provision of In-Region, InterLATA	)	
Services in Louisiana	)	

**Exhibit K:  
North American Numbering Council, Local Number Portability Administration  
Working Group Report on Wireless Wireline Integration**

**North American Numbering Council**

**Local Number Portability Administration**  
**Working Group Report**  
**on Wireless Wireline Integration**

**May 8, 1998**

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### Appendices

**Appendix A - Working Group and Task Force Organization**

**Appendix B - Working Group and Task Force Meetings**

**Appendix C - Architecture & Administrative Plan for Local Number Portability**

**Appendix D Rate Center Issue**

## **SECTION 1 EXECUTIVE SUMMARY**

- 1.1** The LNPA Working Group (LNPAWG) prepared the Wireless Wireline Integration Report to address concerns regarding the implementation of number portability as delegated to the North American Numbering Council (NANC) by the Federal Communications Commission (FCC).
- 1.2** In the First Report and Order the Commission established rules mandating number portability for both LECs and CMRS providers. A separate timetable was established for CMRS providers, requiring them to implement service provider number portability by June 30, 1999.
- 1.3** Previous activities of the LNPAWG and associated Task Forces focused primarily on the wireline segment of the industry and subsequently published associated recommendations on April 25, 1997.
- 1.4** This report addresses the integration of LEC and CMRS provider number portability issues as well as wireless specific issues related to number portability.
- 1.5** In the Introduction (Section 2) the LNPAWG's responsibilities are discussed.
- 1.6** The activities of the Wireless Wireline Integration Task Force focused primarily on wireless wireline integration issues (Section 3). These issues included: 1.) Rate Center Issue; 2.) Request for service provider portability; and 3.) Provisioning.
- 1.7** Number portability has significant impacts in areas that are wireless specific. Section 4 addresses these issues including: 1.) The separation of the MIN and MDN; 2.) Roaming; 3.) Wireless E911; and 4.) Short messaging service.
- 1.8** Through the undertaking of the Wireless Wireline Integration Task Force, in its efforts to integrate wireless wireline processes, impacts to the existing LNP architecture were brought to light. Section 5 contains a description of the updates to the LNPA Architecture Task Force report, "Architecture & Administrative Plan for Local Number Portability". The full report, which has been updated to include CMRS provider number portability issues, is contained in Appendix C.
- 1.9** Section 6 contains the LNPA and Operational Requirements Task Force Report. In this section the NPAC SMS change management orders required to implement wireless number portability are detailed.

- 1.10 The LNPAWG Recommendations and Open Issues section (Section 7) details the recommendations developed in its efforts to integrate wireless and wireline number portability technical and operational processes. This section also identifies issues that will remain open at the submission of this report to the FCC.
- 1.11 Section 8 defines terms and acronyms used in the document.

## SECTION 2 INTRODUCTION TO THE LNPAWG (WWITF)

### 2.1 Work Directives by the FCC.

2.1.1 On July 2, 1996, the FCC ordered all Local Exchange Carriers (LECs) to begin the phased deployment of a long term service provider Local Number Portability (LNP) method in the 100 largest Metropolitan Statistical Areas (MSAs) no later than October 1, 1997, and to complete deployment in those MSAs by December 31, 1998<sup>1</sup>. The FCC further concluded that public interest is served by requiring the provision of number portability by Commercial Mobile Radio Services (CMRS) providers because number portability will promote competition between providers of local telephone service<sup>2</sup>. Number portability is ordered when switching among wireline service providers as well as among broadband CMRS providers, even if the broadband CMRS and wireline service providers or the two (2) broadband CMRS providers are affiliated<sup>3</sup>. The FCC recognized that the wireline industry had already begun to develop the processes and systems necessary to provide number portability while the CMRS carriers had only begun to address number portability. Therefore, the LNP Order established a separate schedule for CMRS provider portability.

2.1.2 All cellular, broadband PCS, and covered SMR carriers are ordered to have the capability of querying appropriate number portability database systems in order to deliver calls from their networks to ported numbers anywhere in the country by December 31, 1998<sup>4</sup>. All cellular, broadband PCS, and covered SMR carriers are ordered to offer service provider portability throughout their networks,

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<sup>1</sup> *First Report and Order and Further Notice of Proposed Rulemaking*, CC Docket No. 95-116 (LNP Order). On March 11, 1997, the FCC released a *First Memorandum Opinion and Order on Reconsideration*, in which the LNP deployment periods for the first two (2) implementation phases were extended.

<sup>2</sup> *Id.* At ¶ 153.

<sup>3</sup> *Id.* At ¶ 155.

<sup>4</sup> *First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd. 8352 (1996) ¶ 165.



including the ability to support roaming, by June 30, 1999<sup>5</sup>. Further, the FCC delegated authority to the Chief, Wireless Telecommunication Bureau, to waive or stay these dates, as deemed necessary to ensure the efficient development of number portability, for a period not to exceed nine (9) months<sup>6</sup>. A request for such relief was filed by the Cellular Telecommunications Industry Association (CTIA) in its November 24, 1997 Petition for Extension of Implementation Deadlines. In addition, on December 16, 1997 CTIA requested the FCC to abstain from enforcing the June 30, 1999 implementation deadline at least until the five (5) year buildout period for PCS carriers expires. These petitions are currently under consideration by the Chief, Wireless Telecommunication Bureau.

- 2.2 Accountability of the Wireless Wireline Integration Task Force to the LNPAWG.** The FCC established the North American Numbering Council (NANC), a federal advisory committee, and directed NANC to make several specific determinations regarding the selection of LNPA vendors, the overall national architecture, and technical specifications for regional databases. The NANC established the LNPA Selection Working Group and two subgroups, including the LNPA Architecture Task Force, to review and make recommendations on these issues. The LNP Architecture Task Force developed the LNPA Architecture & Administrative Plan, which was forwarded to the FCC on May 1, 1997, as an attachment to the LNPA Selection Working Group Report. This report made recommendations concerning LNP architecture, including endorsing a regional LNPA structure. The report and attachments were released by the FCC for public comment followed by release of the LNP Second Report and Order in CC Docket No. 95-116, on July 27, 1997. In this order, the FCC adopted all of the recommendations made in the LNPA Selection Working Group Report, including those contained in the LNP Architecture & Administrative Plan. These recommendations included selection of LNPA vendors by region, the process used to make these selections, the specific duties of the LNPAs, the geographic coverage of the regional databases, and adoption of technical standards.
- 2.3 Future Role of the LNPA Working Group.** Section 7, Future Role, of the LNPA Selection Working Group Report outlined seven (7) areas relating to future LNP implementation activities, including integration of wireless in LNP. This was necessary as the original report was developed

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<sup>5</sup> First Report and Order and Further Notice of Proposed Rulemaking, CC Docket No. 95-116 (LNP Order)

¶ 166.

<sup>6</sup> Id. At ¶ 167.

from a wireline only perspective. In June 1997, the LNPA Working Group established a subgroup to develop a work plan for accomplishing the integration of wireless into LNP, as well as to address several other of the areas defined in the Future Roles section of the report. This activity lead to the formation of the Wireless and Wireline Integration Task Force (WWITF). The WWITF, which is opened to all parties and is representative of all segments of the telecommunications industry, was chartered to make recommendations on the following areas from the FCC's Second Report and Order.

- 2.3.1 Modifications to the NANC Functional Requirements Specifications (FRS), which defines the requirements for the NPAC/SMS, as necessary, to support wireless number portability<sup>7</sup>.
- 2.3.2 Modifications to the NANC Interoperability Specifications (IIS), which defines the requirements for the mechanized interfaces with the Number Portability Administration Center (NPAC) Service Management System (SMS), as necessary, to support wireless number portability<sup>8</sup>.
- 2.3.3 Monitor industry efforts to develop technical solutions for implementing wireless number portability<sup>9</sup>.
- 2.3.4 Develop wireless recommendations to the FCC no later than nine (9) months after release of the Second Report and Order (i.e., May 18, 1998)<sup>10</sup>.

## **SECTION 3 WIRELESS WIRELINE INTEGRATION ISSUES**

### **3.1 Rate Center Issue**

- 3.1.1 Issue: Differences exist between the local serving areas of wireless and wireline carriers. These differences impact Service Provider portability with respect to porting both to and from wireline and wireless service providers. These differences, resulting in an impact called "disparity", exist with the current architecture, making it impossible for some wireless subscribers to port to wireline carriers. This disparity is based on the Architecture Task Force recommendations, which were subsequently adopted by the FCC in the Second Report and Order. In the Second Report and Order the

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<sup>7</sup> Second Report and Order in CC Docket No. 95-166, ¶ 61.

<sup>8</sup> Id. At ¶ 64.

<sup>9</sup> Id. At ¶ 92.

<sup>10</sup> Id. At ¶ 91.

May 8, 1998

North American Numbering Council  
LNPA Working Group Report  
on Wireless Wireline Integration

FCC recommended that the geographic scope of Service Provider portability be limited to the wireline-established rate centers due to technical limitations associated with proper rating. Also in the Second Report and Order the FCC recognized these recommendations addressed wireline requirements and did not reflect wireless needs.

3.1.2 Discussion: The fundamental difference between wireline and wireless service is:

Wireline service is fixed to a specific location. The NPA-NXX portion of the subscriber's telephone number is associated with a specific geographic rate center, and the subscriber's service must be sited within that rate center's geography.

Wireless service is mobile and not fixed to a specific location. While the wireless subscriber's NPA-NXX is associated with a specific geographic rate center, the wireless service is not limited to use within that rate center.

Consequently, if a wireless subscriber's NPA-NXX is outside of the wireline rate center where they wish to port they will not be able to port their number.

Within the WWITF, there is a lack of consensus whether the difference constitutes a lack of competitive parity. The WWITF escalated this issue to the NANC. The two rate center positions and the background information (the wireline and wireless reports) were presented to the NANC and are included in Appendix D.

3.1.3 Solution: Consensus was not reached at the WWITF/LNPAWG on a solution to this issue. The issue was therefore escalated to the NANC on February 18, 1998. A letter was subsequently written to the Local Number Portability Working Group directing it to complete its work regarding the standards and procedures necessary to provide for CMSR provider participation in Local Number Portability for submission to the Federal Communications Commission on or before May 18, 1998.

3.1.4 A copy of the rate center disparity documentation that was forwarded to the NANC as well as the return correspondence from the NANC Chair is in Appendix D.

**3.2**

**Request for Service Provider Portability**

- 3.2.1 Issue: With number portability cellular, broadband PCS, and covered SMR providers must make available upon request to other carriers lists of there switches for which number portability has and has not been requested.<sup>11</sup>
- 3.2.2 Discussion: CTIA has sponsored a series of Subject Matter Expert (SME) workshops on wireless number portability to examine the impacts of the Federal obligation.
- 3.2.3 Solution: CTIA considered several alternatives available to cellular, broadband PCS, and covered SMR providers that are under the FCC order. The alternatives considered are for each affected service provider to satisfy its obligation individually or to establish a third party to provide the information clearinghouse functions necessary to satisfy the federal requirement. The conclusion is establishing a third party for information clearinghouse activity may provide a desired efficiency.

CTIA is currently refining the details of the function to be provided by the third party information clearinghouse. If the third party is established for providing the information clearinghouse function, this may be an alternative mechanism for requesting service provider to obtain switch and NXX information and to make request for number portability deployment.

### **3.3 Provisioning**

- 3.3.1 Issue: The existing wireline inter-service LNP operations flows do not meet the needs of the wireless service providers.
- 3.3.2 Discussion: CTIA sponsored a Subject Matter Expert Workshop on Inter-Service Provider Communication. The scope of this effort was to focus on the functions required to support inter-service provider communication. This includes provider-to-provider communication, and provider-to-NPAC/SMS communication. The Workshop evaluated the wireline processes, including the Ordering and Billing Forum (OBF) Local Service Request forms, NPAC/SMS communication, and Operational Flows to determine their applicability to the wireless industry.
  - 3.3.2.1 Although several recommendations are made in the Workshop Report, two have major significance. The WWITF adopted these

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<sup>11</sup> FCC First Memorandum Opinion and Order on Reconsideration, FCC 97-74, CC Docket No. 95-116, para. 137 and Rule 52.31 (a) (1).

two recommendations with modifications. The first of these recommendations proposes a two phased approach to the implementation of inter-carrier communication to support Wireless Number Portability. The first phase involves using the Local Service Request Process defined by the Ordering and Billing Forum including the following LSR forms: The Local Service Request Form; End User Information Form; Number Portability Form, and Local Service Request Confirmation Form. The second phase would involve eliminating the LSR process only when porting from a wireless to a wireless carrier by implementing an automated solution through the NPAC/SMS interface.<sup>12</sup> The primary reason for removing the LSR from the wireless to wireless porting process is to reduce the number of steps required to port a subscriber. In turn, this can reduce the length of time required to port a subscriber.

- 3.3.2.2 A fundamental part of the proposal was to eliminate carrier-to-carrier communications to streamline the wireless porting process. The elimination of the LSR from the wireless porting process is thought to have a major benefit of reducing the overall time and cost of porting a subscriber. A recommendation to implement the second phase would be subject to a feasibility/cost study, followed by acceptance of the industry (WWITF). This cost study will be completed in conjunction with the feasibility on the NPAC/SMS changes and wireless SOA interface changes required for phase II.

If the outcome of the feasibility study indicates that the recommended NPAC/SMS changes for implementation of inter-carrier communication is favorable, the wireless industry does not want to put the NPAC/SMS system enhancements on the critical path to launching wireless number portability. Rather, the wireless industry wants to pursue the NPAC/SMS changes in parallel with its preparation to introduce number portability. The wireless industry will use the existing wireline LSR process until the associated NPAC/SMS changes can be delivered. If the NPAC/SMS changes can be completed in time for wireless number portability launch then wireless carriers would disregard the LSR process and implement number portability between wireless carriers using the NPAC/SMS enhancements. Wireless carriers could continue to use the existing LSR process for wireline/wireless porting.

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<sup>12</sup> This second recommended phase is different than CTIA's Inter Service Provider Portability Workshop recommendations. That group recommended the elimination of the LSR for all porting to or from a wireless carrier, whether with a wireline or wireless carrier.

3.3.2.3 The second CTIA recommendation from the Subject Matter

Workshop on Inter-Service Provider Communication proposes changing the porting intervals when porting from a wireless carrier to a wireless carrier to include a Firm Order Confirmation (FOC) response of 30 business minutes, and two (2) business hours for the porting process. Therefore, the timeframe to complete a wireless to wireless port is two and one half business hours. The NPAC SMS contains timers that allow a port to proceed even in the absence of concurrence from the old service provider. In addition, the NPAC SMS contains a conflict period that allows for holding a pending port for a defined timeframe before the due date. Under certain conditions a service provider may use this process to place a pending port into a conflict state of six (6) business hours. If the conflict is not resolved between the service providers at the end of the conflict period, the port may proceed at the discretion of the new service provider. These reduced porting intervals do not consider impacts on resellers of wireless services.

3.3.2.4 For ports from wireline to wireless, wireless service providers desire reduced porting intervals from those currently used by the wireline segment of the industry. The current porting intervals for wireline include a maximum of one (1) day for the FOC process and three (3) days for the porting process. Wireline ports may be accomplished in less time when conditions are optimal, however, the timeframes were established to support the complex systems and work processes of all the wireline service providers. A variety of systems are used during the porting process including, but not limited to the following:

LSR/FOC Systems – Automated processing of inter-service provider communications

Service Order Systems –Initiates the service orders to begin the porting process

Inventory Systems – Manages the distribution and assignment of equipment and telephone numbers

Work Force Assignment Systems – Schedule assignments to accomplish any facilities work.

Billing Systems – Updates records required to ensure accurate billing

Maintenance Systems – Updates records required to enable quality trouble resolution

Switch Administration Systems – Modifications to switch translations and to activate ten (10) digit triggers

E911 Systems – Updates records to ensure accurate data

The above systems were individually designed and developed by each wireline service provider. Generally speaking, these systems operate in a batch environment that requires at least a twenty-four hour timeframe to process updates. Porting intervals were negotiated during 1996 and 1997 by the entire wireline industry segment to allow for differences in processing parameters of these systems.

- 3.3.2.5 The one (1) day LSR/FOC process and the three (3) day porting interval were negotiated by the wireline carriers in order to accomplish all of the system updates and any physical work required to accomplish the port. For example the batch service order process used by wireline carriers results in the need for the one (1) day LSR/FOC process. In addition, during the confirmation process where large business customers are involved, some service providers may elect to determine that the party requesting the port is authorized to make such a request. During the three (3) day porting timeframe it is critical to complete the translations work and/or to activate the ten digit trigger through a batch update in order to enable routing calls to ported customers.
- 3.3.2.6 The other systems described in Paragraph 3.3.2.4 above operate in a batch environment at virtually all wireline service providers. The records maintained in these systems are critical to insure accurate and timely billing, quality trouble resolution, accurate call routing, timely completion of the porting process, and accurate E911 records. During the long and contentious negotiations to establish wireline porting intervals, the wireline industry established the three (3) day porting timeframe in order to accommodate the existing systems and work processes of all service providers.
- 3.3.2.7 There has been no significant porting experience to date in the wireline industry. These timeframes were established as a starting point with possible revisions in the future should conditions warrant change. It was determined that a cautious approach was wise in order to develop a quality porting process to avoid negative

customer impact. Therefore the one (1) day LSR/FOC and three (3) day porting intervals were adopted by the wireline industry.

- 3.3.3 Solution: The two recommendations described above, which were established on the basis of the current wireless business model that allows for provision of service in a matter of minutes, are addressed below.
- 3.3.3.1 To address the first recommendation, elimination of the LSR/FOC process, the wireless industry segment requests a feasibility study to identify costs and timeframes to implement the changes necessary to replace the LSR/FOC process. The wireless service providers plan to use the existing LSR/FOC process if a replacement is not available by the time wireless portability is implemented.
- 3.3.3.2 The second recommendation, reduction of porting intervals, is being addressed from two perspectives. For ports between wireless carriers, an NPAC SMS change order was developed by the LNPA Technical and Operational Requirements (T&O) Task Force that proposes changes to the existing NPAC SMS timers. This change will provide the same level of support in the NPAC SMS for wireless to wireless ports as exists today for wireline to wireline ports. Further description of this and other NPAC SMS changes is described in Section 6 following.
- 3.3.3.3 The wireless industry considers the initial wireline porting timeframes acceptable for ports from wireless to wireline. However, wireless service providers desire reduced porting intervals when porting from a wireline to a wireless carrier. Before a determination to shorten porting intervals can be considered, the wireline industry recommends that an analysis be performed to evaluate the impacts of actual porting experience on systems and work processes effected by proposed shortened porting intervals. It is necessary to gather sufficient porting data to complete this analysis. In addition to evaluating porting experience, the analysis will consider several other issues such as competitive parity to insure equal treatment by all service providers in the porting process. The wireless and wireline service providers will jointly evaluate certain operational issues such as different treatment of holidays and different hours of operation between the two industry segments. Finally, the wireless carriers will evaluate the impacts of the porting process on wireless resellers. In order to accomplish this analysis, the LNPA Working Group developed the following high level work plan:



May 8, 1998

North American Numbering Council  
LNPA Working Group Report  
on Wireless Wireline Integration

The WWITF will work during the remainder of 1998 to review systems and work processes in order to determine the reduction in porting interval from wireline to wireless carriers. Monthly discussions will take place at the LNPA Working Group meetings. Monthly status reports will be made to NANC with the final recommendation presented to NANC no later than December 31, 1998

- 3.3.3.4 With any change in the wireless number portability implementation date NANC reserves the right to review time frames and processes stated in Section 3.3.3.3.

## **SECTION 4 WIRELESS SPECIFIC ISSUES**

### **4.1 Background Information: Mobile Identification Number (MIN)/Mobile Directory Number (MDN) Separation for MIN based providers (e.g., TDMA, CDMA, AMPS)**

- 4.1.1 The separation of the MIN and MDN refers to the administration and processing of the Mobil Identifier Number (MIN) independently from the Mobile Directory Number (MDN). The former is a number used to uniquely identify the mobile set to the network while the latter is the telephone number that is dialed to reach the mobile set. Prior to WNP, those wireless carriers that relied on MINs for terminal identification often relied on the assumption that the MIN was the same value as the telephone number. Thus, within the network elements and within the operation support systems, the values were used interchangeably.
- 4.1.2 With the advent of number portability, the industry consensus was to separate these values allowing the customer to specify the MDN when they port and the new service provider specifying the MIN. With this architecture, some systems are retained with little impact while other systems are significantly impacted.
- 4.1.3 Roaming is an integral part of wireless service. It allows a wireless carrier to provide service for subscriber when they are outside of their "home system". This is accomplished by means of business agreements between the roaming carrier and their home carrier. The process of roaming begins when the subscriber ("roamer") powers on their mobile station. The mobile station sends their MIN value to the serving switch which then sends a registration notification message to the home system. This request is routed through signaling networks using the MIN value. The home system